

THURSDAY, OCTOBER 30, 1902.

MODERN SCIENTIFIC GEOGRAPHY.

The Nearer East. By D. G. Hogarth, M.A. (The Regions of the World. Edited by H. J. Mackinder, M.A.) Pp. xvi+296. (London: Heinemann, 1902.)

IT has long been a reproach to the British nation that it, the greatest, if not the only real, colonising nation of the West, undoubtedly also the most travelled nation of the world, devotes less time and trouble to the study of geography than any other people. The manner in which geography is taught, or rather is not taught, in our great public schools is indeed more than a reproach to England, it is a disgrace. Great geographers we have had and have; our disgrace lies in the fact that geographical instruction is well-nigh omitted from the curriculum of the schools which our upper classes are accustomed to patronise, our reproach in the fact that the average English "classical" schoolmaster would probably prove ill-fitted to impart such instruction were he given the opportunity and the means of doing so. What average "educated" Briton could answer a series of simple questions on the geography, commerce and politics of the Persian Gulf? Yet a German observer would probably consider it remarkable that the citizen who may have ere long to cast his vote this way or that as to whether Russia is to be peacefully allowed to extend her sway by Teheran to Bushire and Bandar Abbas, or is to be forcibly prevented from doing so by war, should know practically nothing of a matter which may have an outcome most vitally affecting his empire and himself!

Of late, however, we seem to be trying to improve ourselves a little in this matter of general geographical knowledge. The University of Oxford has created a Readership in Geography, and it could have found no better man to fill the post of Reader than Mr. Mackinder, whose energetic geographical propaganda is deserving of the highest praise. The series of handy and useful books entitled "*The Regions of the World*," of which he is editor, does indeed "supply a long-felt want," for it is calculated to supply, not only valuable books of reference to the merchant and the politician, and interesting manuals for *Selbstunterricht* to the don and the schoolmaster, but also readable and informing volumes which will reach the average patron of Mudie's Select Library, which is exactly what one wants.

The preparation of the volume which deals with the "*Nearer East*" has been confided by Mr. Mackinder to hands in all respects fitted to deal with it. Few know the lands of the Levant better than Mr. Hogarth, and though he may not have seen the Arabian waste or the wall of Elburz with his own eyes, yet no reader of his book can doubt his capacity to use the eyes of others to the best advantage, and it can certainly be said that the portions of his work which deal with Arabia and with Persia suffer in no way from the fact that he himself has not yet visited those countries. They emphatically give the lie to the pretension that no man may write a book about a country unless he has been there himself.

As to the limits of the "*Nearer East*" opinions may

differ. Mr. Hogarth rules out the whole north coast of Africa west of Egypt; yet Cyrenaica and Tripoli are of the Nearer East, and, though we may consent to omit Algeria because Algiers is a French city, surely Morocco is of the East Eastern. But Mr. Hogarth sets his frontier in the Libyan Desert, and, all things considered, we have no fault to find with him for having done so.

The boundary-line of his territory runs eastward from the northernmost limits of Albania across the "Balkan Peninsula" to the Black Sea coast of Eastern Rumelia; thence to the Caucasus and the Caspian, and then south-eastward across the desert which divides Khorasan from Kerman and Irak to the limit of Baluchistan on the Indian Ocean; thence round Arabia and up the Red Sea to a point on a line with Aswân; then along the historical southern boundary of Egypt proper to the Western Desert, and so northwards west of the Oases up to and across the Mediterranean and up the Adriatic to his starting point.

The author deals with the various lands comprised within this boundary in this order: first, "The Balkan Belts," then "The Asian Ascent," then "The Central Upland," then "The South-western Plains," lastly "Egypt." In the "First Part" of the volume these lands are thus generally described; then follow three chapters on their geological structure, their climates and their "Physical Circumstance." In the "Second Part" the human inhabitants of the Nearer East first appear upon the scene, in chapters dealing with their distribution and grouping, the products of their lands, their communications, and their life under the varying conditions which obtain in the various regions described. A chapter on "World Relation" finishes the book. Maps are frequent and, on the whole, good.

This is a modern scientific geography book, systematic in plan, clear and picturesque in description, and, above all, "giving to think."

Upon the excellence of the general plan of the work we need enlarge no further. So far as description is concerned, what could be better than the following impression of the great island which fences in the Hellenic world to the south with its mighty mountain barrier:—

"A serrated and shaggy wall, rising from a wind-tormented, inhospitable sea, and interrupted by three main depressions, of which two are low; little locked pans and long verdant valleys, hidden inland behind spurs; spontaneous vegetation wherever the north wind is shut away—such is the impression left by Crete" (p. 123)?

Or take this, of the Egyptian desert (p. 142):—

"The Egyptian wastes are of limestone formation from the sea to Silsileh. . . . Accordingly, except between Silsileh and Aswan, the traveller will expect to find in the desert all varieties of contour, hill and cliff, valley and gorge, beds of streams and of tributary rivulets; yet neither verdure nor water, but a skeleton of earth, such a landscape as may be imagined in the moon. . . . And here and there in the hollows and wadis will be even such tussocky vegetation as camels love, drawing its life from a hidden humidity. . . ."

Space forbids our giving the whole of the description which follows of the prospect which greets the desert traveller on his arrival on the brink of the Nile valley; we must therefore content ourselves with the following:—

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"Small clumps of palms mark the villages, and now and again, but rarely, lengthen or widen out into larger plantations. What other trees there are, sycamores, tamarisks, or thorns, stand for the most part singly near the desert edge. The squat mud cabins, dominated often by the white 'Italianate' house of a *sheikh*, are raised a little on their own débris. The long line of a curving dyke, carrying beside a canal a cultivation road or a railway, cuts the horizon. The angles of white sails or a smoky funnel indicate the river; the chimney of a sugar factory is a landmark for miles. The rest is one flat stretch of varying hues, brown, green, red or yellow, according to the season, or is for two months a burnished sheet of inundation, now wider, now narrower, now defined by high cliffs, now melting into an easy gradient of desert, now more to east, anon more to west of the central stream. . . . Serious change in the landscape occurs only far south and far north. Above Silsileh the green belt narrows to a thread. Golden ruin of the sandstone slides on the west almost to the margin of Nile, and low cliffs rise steeply to east with little interval of plain; and presently, with the intrusion of plutonic rocks, the scenery loses all amenity and the river flows with obstructed current between beetling crags which only recede to admit the naked waste within a few yards of the stream. Far northward again the deep lands grow ever more salt and sodden, till reedy marsh supervenes and passes insensibly into permanent inundation; and shallow and slimy meres with few intervals stretch all the length of the Delta base, washing their wavelets on the low sand hills and bars of stony beach, which scarcely keep out the discoloured sea."

Mr. Hogarth does not say much of the peculiar beauties of Egypt, beauties of distance and of light: the Arabian wall above Gîrga seen from the Libyan cultivation-border, nine or ten miles away, through and over a noonday haze; the bastions of Kaṣr es-Sayad or the three peaks of Gebel el-Geir at sunset, salients aglow with richest rose, recesses blue with deepest indigo; Luxor approached across the western sands towards evening, when even that abominable castellated villa-residence which flies the Dutch flag cannot spoil the marvellous effect; things not only not to be forgotten, but to be seen again, for no country excites in the minds of most such a *Sehnsucht* as Egypt. Greece does not; were it not for her historical associations she would be of no more interest to the average man than is Albania; she possesses naturally no such fascination as Egypt, beautiful as she is.

"The natural beauties of Greece," says Mr. Hogarth (p. 122), "are those of distance, beauties of outline on a large scale, beauties of white snows and grey rocks in juxtaposition to an ever present sea of deepest blue, beauties of opalescent lights cast by oblique rays shining through suspended dust raised by the daily winds."

Beauties of detail there are few; all is so patchy and scrubby. Yet what can be more delightful than the view as one descends to Marathon from above Araphên, looking over the broad Gulf of Petali to where Ocha raises its mighty snow-clad mass into the sky? Of the views of Greece from Lykabettos or from the splendid Frankish castle which crowns the Lárissa of Argos we need not speak; the first at least, or its smaller edition from the terrace of Niké Apteros, is almost too well known, especially at sunset; but the second enables one to realise very well the small geographical extent of continental Hellas, for from the keep of the Lárissa the

eye can range from Parnon to Parnassus, roughly then from Sparta to Delphi.

Greece plays impudence to Egypt's dignity. Monotonous this dignity may be, yet this very monotony only serves to make it the more impressive. Such beauty as Greece has Egypt does not possess, beauty of sea and snow-mountain; yet nothing in Greece can so subdue the beholder to its fascination as can those interminable bastioned hills with the sand-billows washing half-way up their sides, those curving, branching wadis behind them where on the sand the once water-worn boulders lie blackened by ages of exposure to an un pitying sun, or that monotonous fen which with its palm-clumps, its strings of laden donkeys or camels winding their dusty way along the raised *gisrs* or causeways, its innumerable *sakiyas* each with its boy (in charge of the motive power, a pair of oxen or buffaloes), chanting his monotonous song in duet with the groaning of his machine as he is carried round and round, stretches away to where in the hazy distance a shimmering line of cliff marks the opposite limit of Egypt. Greece always interests and often charms; Egypt *imponirt*.

We have said that Mr. Hogarth's book gives the reader much to think about. Naturally this is very much the case when he touches on political matters. His touch is light, as befits a book of this kind; his intention is simply to draw the reader's attention to matters with regard to which it is necessary that he should form some opinion for himself. The Persian Gulf, for one example, the future of Arabia for another. Is the Power which holds Aden and Cairo and dominates Muscat and Kowēt eventually to hold sway at Er-Riadh and Hayil either as she now rules at Ajmír or as she controls Bikanír or Baluchistan? This is a question which will have to be faced in the future.

Mr. Hogarth's appreciations of the peoples who inhabit the region which he describes are interesting; his note on the modern Greek character (p. 241) is worth quoting:—

"Unprejudiced appreciations of the character of South Balkan peoples are very rare. The Greek character, especially, is seldom treated justly by a northern observer, apt to remember the ancient Hellene too much or too little. The Oriental element does not give endurance and dignity to Latin decadence in Greece as in Spain, because it is not due to the intrusion of a strong Oriental race. To be fair, the Briton must overcome his strong aversion to ideas without works. . . . In published accounts of the Greeks one has usually to do with social, religious, or scholarly idealists with little knowledge of the realities. To their views a course of Byron's letters from Greece and Finlay's final volume supplies a salutary corrective."

Strictly speaking, we might cavil at Mr. Hogarth's attribution of modern Greek want of stedfastness and want of dignity to the intrusion of an Oriental race not so strong as that which has intruded into Spain. Dignity Spain has, but grit she has no more than Greece; surely also the Turk is, as an Oriental, really stronger than, if not so dignified as, the Arab.

An editorial note at the beginning of the book tells us that

"Owing to Mr. Hogarth's absence in Crete at the time when it was necessary that this book should go to press,

a few errors have unfortunately remained uncorrected. These he has noted on p. xvi."

One or two have still escaped the author's notice. Muscat is ordinarily spelt by him "Maskat," but once "Mascat" appears; and no regular rule is followed with regard to the hyphening of Arabic compound names; thus we have "Roba-el-Khali" (p. 73), but "Wadi er Rumma" (p. 71), which is spelt "Wadi-er-Rumma" in the index. So in other cases. The correct form, of course, is Roba el-Khali, Wadi er-Rumma; only one hyphen is necessary.

We are at one with Mr. Hogarth as to the undesirableness of too pedantically accurate a transcription of Oriental names, but it seems to us that "Hadramut" and "Riad" would be better replaced by Hadhramut and Riadh, which we can pronounce even if the Germans cannot. And though Mr. Hogarth defies the pedant with his "Bedawins," we are unable to back him up in his defiance; "Bedouins" or "Beduins" may be all very well, but not "Bedawins"; either "Beduins" or "Bedawin," one or the other.

In the maps there are one or two mistakes which need correction; for instance, in Fig. 36, "Yidda." In Fig. 16 the railway is made to cross the Nile immediately south of Siut, which is itself placed much too far south. In reality the railway crosses further south than in the map, at the Nag' Hamâdi bend. South of Aswân, spelt here and in other maps "Assuan," the railway gets wrong again. There is no line between Shellal and Wadi Halfa, and there *is* a line along the Nile bank south of Wadi Halfa, which runs as far as the Third Cataract, to Kerma. In Fig. 49 the Athens-Kephisia-Lavriion line is not inserted at all, nor is the new Athenian "underground" from the Theseion *viâ* Monasteráki to the Omonoias. It is true that these are only sketch-maps, but if the railways are inserted in them at all, they should be inserted correctly. In the fine ethnographical map opposite p. 176, we do not quite like the unhesitating colouring of Egypt with the Semitic yellow; there should be some brown or other coloured stripes across it. Nor do we think that pure brown should begin with the Wadi Hammâmât; Nuba is not spoken north of Darâw, south of the 25th parallel, so the line should run north-eastward from Darâw to Kuşêr. Should there not also be some Magyar, Szekler and Teutonic stripes and spots in the portion of Hungary and Siebenbürgen which comes into the upper left-hand corner of this map and is entirely coloured with Rumanian purple? It is true that the book does not deal with these parts at all, but if they are coloured in the map, the coloration should be correct.

For these cartographical slips Mr. Hogarth, of course, cannot be held entirely responsible. We point them out merely that they may be corrected in the second edition. They in no way detract from the value of the maps as a whole.

One thing we regret, the absence of photographs. A few pictures of salient features of the land—a Greek isle, a desert wadi, a Cilician gorge—would have added greatly to the interest of the book.

We welcome Mr. Hogarth's work, then, not only as a notable contribution to geographical literature, but as a book which will—as is the idea of the series—appeal to a

NO. 1722, VOL. 66]

larger public than the members of scientific societies, and will probably not only cause its general readers to take an unwonted interest in geography, but will also direct their attention to threatening political questions for which sooner or later they will be called upon to help to devise a solution.

H. H.

CHEMISTRY AND LIFE.

Das Eisen als das thätige Prinzip der Enzyme und der lebendigen Substanz. Von N. Sacharoff. Pp. 83. (Jena: G. Fischer, 1902.) Price M. 2.50.

THIS philosophical treatise, originally written in Russian, is presented to us in a translation by Dr. Rechtsamer. Without going so far as to say it is of the first importance, it may be safely affirmed that it will be welcomed by physiologists as a contribution to the discussion of the more obscure chemical processes connected with the life of the protoplasm. The author at the outset reviews the different hypotheses that have been advanced as to the intimate constitution of living matter, and finds them all unsatisfactory. He holds that the behaviour of protoplasm cannot be attributed to either its organisation, or its chemical composition or structure, and suggests that all the vital processes must be regarded as arising from a decomposition or splitting of the living substance in consequence of the access of oxygen, followed by a series of recombinations. Hence he turns to a study of the nature of this auto-decomposition with a view to determining its cause.

Proceeding to the action of oxygen in the animal and vegetable cell, and seeking for something universally present therein which is capable of easy oxidation, and of yielding compounds which can be reduced again or further decomposed with comparative ease, he considers he has found it in minute traces of iron. He puts forward accordingly a hypothesis of his own, to the effect that the various vital phenomena of protoplasm are set up by the oxidation of a minute trace of iron contained in the living substance, with subsequent or concurrent hydrolysis.

This theory is examined at some considerable length in the subsequent chapters, attention being given first to enzyme action, which he takes as one of the most remarkable of the metabolic processes. His views on this point will not commend themselves to all physiologists, but he argues in favour of them with some skill. After reviewing the theories of enzyme action advanced by Liebig, Nägeli, Berzelius, Würtz and more recent writers, and quoting published experimental evidence of the action of several of these bodies, he suggests that the active principle of enzymes is a substance which is capable of auto-oxidation and auto-reduction, and that the working which they exhibit depends upon alternate oxidation and reduction of this active principle. An experiment of his own with papaïn may be quoted in illustration of his view. He prepared a solution containing 2 per cent. of papaïn and heated it to boiling. Taking another solution of the same enzyme, containing 10 per cent., he prepared three tubes. No. 1 contained two drops of this active extract and 10 c.c. of the boiled extract; No. 2 two drops of the active extract with 10 c.c. of water; No. 3 10 c.c. of the boiled extract alone. He added to each a